

The specimens from Speckled Mt., Me. four in number, are all long-winged and perhaps flew there in the adult stage.

10. *Orphula olivacea* Morse. Figs. 10, 10a.

*Stenobothrus olivaceus*. Morse,—Psyche, '93, 477; '94, 104. Beutenmüller, 294.

This species I have described in full elsewhere (loc. cit.) and there is very little new to add here. The ♂, while often presenting a greenish hue at

capture, dries to a dull brown. The green form of ♀ is about one-fourth to one-third as numerous as the brown.

In New England it is known only from Greenwich and Stamford, Conn. Beutenmüller reports it from Sandy Hook, N. J., and I have received it from Prof. J. B. Smith, from Anglesea, N. J., where it seems to be common. One female from the latter place is extremely large, measuring as follows: hind fem. 14.5; teg. 22; total length 30 mm.

## THE CONDITION OF APATELA.

BY A. RADCLIFFE GROTE, A. M., HILDESHEIM, GERMANY.

It is a matter for regret that in 1867 we had no larger series of the American species with us, when the late Mr. C. T. Robinson was my companion in a visit to Guenée at Chateaudun. I had *hamamelis* and a paler species, besides a few others, and this paler species is what I subsequently named *clarescens* in American collections. Guenée had his types in little glass boxes, and, after a long study, thought that the pale species might be *clarescens*, but it differed from his type somewhat. Guenée said that some of his types were sent back to the British Museum, and some named specimens, but many of his types he had with him. Of some of these he furnished me drawings (which I can no longer find) at a later period. There were no *Apatelas* among these. One was *Oligia exesa*, which I recog-

nized in my collection and which, with the other American species, we may have to refer to *Monodes*, as they are probably not congeneric with the type of *Oligia*, the European *O. strigilis*.

From what M. Guenée told me, it is clear that positive certainty as to the species of *Apatela* cannot be obtained until the types are examined which are now with M. Oberthür. These types must be compared with the named examples or types in the British Museum, and, above all, with Guenée's probably sufficient, yet somewhat scanty descriptions in this genus. The decision as to these species cannot rest alone on Mr. Butler's comparisons of the named examples in coll. Brit. Mus. From these named examples Butler and Smith refer *clarescens* as a synonym of *hamamelis*, leaving my *clarescens* without a

name, or rather free for Harris' *pruni*, a name based on a larva which is said to be that of my *clarescens*.

And against this latter course there seems no possible objection, for Guenée was uncertain that my species was his, and especially drew my attention to certain features which made the identification uncertain. But whatever Guenée's type of *clarescens* was, it was not identical with *hamamelis*. So good an entomologist as Guenée could not have redescribed his species from a specimen absolutely the same with his type. And yet this is what Prof. Smith would have us believe. This is the result of referring varieties as synonyms; for I admit the possibility of *clarescens* being based on a pale, perhaps large *hamamelis*. The same thing is repeated in *Heliophila* (*Leucania*). Here we are asked to believe that Guenée's *extincta*, *linita*, and *scirpicola* are, without any question, one species only. Now *Apatela* and *Heliophila* have this in common, that certain species are separable on very indistinct characters, but, especially in *Heliophila*, the characters are constant and readily seized upon by an expert. Neither in *Heliophila* nor in *Apatela* have I ever described a species under two names, whereas this has happened to me in genera where the species are usually more broadly distinguished and are perhaps more prone to vary. But, in my case, the mistake has usually happened owing to my having been obliged to return my type; consequently I could not compare the second specimen, which,

varying a little from my first type, seemed to be a distinct species from the picture in my memory. To suppose that Guenée, with all the specimens before him, could redescribe species of *Heliophila* and *Apatela* seems difficult. Guenée is not Walker.

*Clarescens* Grt. is therefore *pruni* Harris; but about *clarescens* Gn. there hangs a doubt, which the future monographer may solve. My memory of Guenée's type is not strong enough to risk any further opinion, while my deference to Guenée, and my relative unacquaintance with the species in 1867, led me to form no opinion of my own upon the specimen. The impression I took with me was that Guenée was disposed to make the identification on the whole, so that I adopted the name.

Now as to *brumosa*. I did not have this with me in 1867. After I had described *verrillii*, Mr. Morrison identified this species as *brumosa*. I thought this identification probable and adopted it. The species apparently belongs to the subgenus *Pharetra*, and I may here say that I have wrongly used the subgenus *Apatela*, the type of which is of course *aceris* for this group, in my papers in *Papilio* and the Canadian entomologist upon our Dagger Moths. The type of *Pharetra* Hübn. Verz., is, therefore, *auricoma*. Now, Butler and Smith identify *brumosa* with *persuasa*. The latter is a Texan species, and it seems to me doubtful that Guenée should have had this species before him, since his material came mostly from the

northern Atlantic district, although he had Florida material from Doubleday, and Georgia material probably originally from Norwich or even Abbot. *Persuasa* must be compared with Guenée's description to check this reference. But extremely doubtful seems to me Butler's identification of *longa* with *brumosa*, and it is doubtful to its author. Again we are asked to believe that Guenée redescribed his own species. Did Guenée write his three volumes with one collection before him, or did he merely edit descriptions made at different times, returning his types in the meanwhile so that the possibility of such mistakes becomes credible? My belief is that the former is the fact, hence these mistakes become incredible to me. The impression I have is that we ought to refer *zerrillii* to *brumosa*, and Walker's two names as shown by me in the Illustrated Essay as further synonyms, restoring *persuasa* to its author. But in my lists, I have felt bound to follow Mr. Butler.

The synonymy given in the Catalogue of Prof. Smith of *americana* is unintelligible to me, since *hastulifera* A. & S. and *acericola* A. & S. are cited also as distinct, while I have shown that Guenée's *hastulifera* is *americana*. Different localities are given to the three, whereas I know of but one species, viz., *americana*, which Harris considered to be *aceris* A. & S. (= *acericola* Guen.). Guenée, who did not know Harris' work, described *americana* as Abbot's *hastulifera* and proposed the name *acericola* instead of

Abbot's *aceris*, which he did not identify. Hence the synonymy (I leave Walker out of the question) runs thus: *americana* Harris = *hastulifera* Guen. nec A. & S., leaving Abbot's two species unidentified. As Abbot's *aceris* is certainly not the European species, this must be called *acericola* Guen., if identified as distinct from *americana* and *hastulifera*. Whether there is really more than one species is doubtful: but, in any case, Abbot's two species must be identified from Georgia larvæ (since the moths are badly drawn, or rather too difficult to distinguish from plates made under the circumstances). Harris thought the larva of *aceris* agreed with the larva of his *americana*, hence his reference of Abbot's species as identical with his own. Guenée, who had no larva (of *americana*), thought that the figure of the moth of *hastulifera* represented our northern species already described as *americana* by Harris, and made the identification. As regards the two plates of Abbot, Guenée and Harris are at cross purposes, but in any event have only one species in nature before them, viz., *americana*. The references in Prof. Smith's catalogue give the impression as if three distinct species had been identified and my speculation that the larvæ had perhaps been transposed by Abbot, to account for the opposite identifications of Harris and Guenée, is adopted. I repeat, until Abbot's species are made out beyond peradventure from Georgia material, all speculation is futile.

From the foregoing I believe that the *status quo* of *Apatela* remains virtually unchanged since my paper in *Papilio*, iii, 116, 1883. The list there given by me of unidentified names can only be safely changed to-day by the elimination of two of Harris' posthumous names based on larvae: *Ulni* Harris, being based on larvae belonging to *morula*, as Prof. Smith tells us, and is therefore a synonym; while *pruni* Harris may be used for the species called by me *clarescens*, since the evidence is that Guenée's *clarescens* is not mine, although exactly what it is is not made out unquestionably. As before, the "future monographer" whom we are all expecting (I wish I had the naming of him) must busy himself with the question of what Guenée really described under the names: *spinigera*, *telum*, *interrupta*, and *longa*, and he will do well to reject *interrupta* altogether, as founded on a figure which, in this difficult genus, will hardly be admitted as a proper basis for a description and name. It will shorten his labors by so

much. He will have also to decide what Abbot intends by his plates of *aceris* and *hastulifera*, and he will have an easier task to make out Harris' remaining name *salicis*. I shall be glad if the other names in the catalogue, which are mainly based on my identifications, receive his confirmation. But he must conscientiously compare Guenée's text with the material, inasmuch as names derive their authority from literature, not from labelled specimens, however convenient these may be as a substitute for the somewhat arduous labor of making a specimen "function" to a description.

*Note.*—Since finishing this article I have received a letter from Mr. Harrison G. Dyar, who kindly informs me that the larva figured in Harris' Correspondence under the name *salicis*, belongs to *oblinita*. If there is any difference between our northern species and *oblinita* as figured by Abbot, we have a name in *salicis* for the northern form. Dr. Thaxter called my attention to material collected by him in Florida, but I was not able to find any points of specific distinction as compared with northern *oblinita*.

## PREPARATORY STAGES OF COSMOSOMA AUGE LINN.

BY HARRISON G. DYAR, NEW YORK.

A full fed larva was found at Lake Worth, Florida, late in December and eggs were obtained from several female moths found flying over the flowers of some vines of *Mikania scandens* growing in the swamp. I am much indebted to Mr. F. Kinzel of Palm Beach, who has kindly sent me leaves of the food plant every few days, and thus enabled me to raise the larvae and observe their stages.

*Eggs.* Rather low conoidal with flat base; smooth, shining, translucent, waxy white, faintly tinged with yellow; no marks under a hand lens. Under a half-inch objective the reticulations are linear, rounded, hexagonal, irregular, even four-sided, scarcely raised. Diameter 0.8 mm., height 0.6 mm. Usually laid singly on the young leaves of the food plant. Duration of this stage eight days.

*Stage I.* Head colorless, eyes black,